

# Cadastral Reform of Indigenous Land Information and Environmental Sustainability in New Zealand

**Munir Morad and Mairi Jay**

**ABSTRACT.** New Zealand's cadastral system has come under scrutiny in recent years. A sharp rise in the number of land claims by the country's indigenous Maori, accompanied by historic environmental legislation, have prompted calls for cadastral reform. Although no consensus has yet emerged among experts about future cadastral reforms, land information managers and Maori leaders generally concede the need for an overhaul of current land information management practices. However, any future reforms will have to reconcile seemingly incompatible goals, by being legally sound, culturally appropriate, and environmentally sustainable. Most of the land in New Zealand is subject to legislation enacted within the past decade, which incorporates concern for the issues of sustainability, as well as the Maori's cultural values and ancestral rights. The presence of this legislation, and a growing capacity among Maori to be involved, both mean that Maori concepts of land management and sustainability are receiving increasing attention in New Zealand, and are likely to influence the shape of future cadastral reforms for Maori lands.

## Introduction

The Europeans started to explore New Zealand around 1740, and by the second quarter of the nineteenth century, settlers (mainly from the British Isles) were arriving in New Zealand in large numbers. After the Maori had petitioned Queen Victoria about the damage being done to their land and culture by uncontrolled land speculators and gold miners, a historic treaty was signed at Waitangi on February 6, 1840, to alleviate Maori concerns (Belich 1996). Several Maori chiefs signed the treaty, giving the English Crown the right to purchase Maori lands at "fair prices" in return for "undisturbed possession" of existing Maori lands, forests, and fisheries. The treaty also conferred on the Maori "all the rights and privileges of British subjects" (Crengle 1993, 6-7).

However, despite the egalitarian spirit of the treaty, its principles were frequently ignored by the settlers and colonial authorities alike. Dissatisfaction over the control of land in the North Island subsequently led to war, with the result that much Maori land was confiscated. The Maori were especially dissatisfied because the land which the colonial authorities were entitled to purchase, under the terms of the treaty, was resold to settlers at substantial profit (Williams 1983). During the Land Wars (1844-1872), the Native Land Act of 1862 apparently contravened the spirit of the Treaty of

Waitangi, by legalizing private land transactions between settlers and the Maori.

Maori land grievances and the subsequent Land Wars may have been compounded by the slow development of the British land registration system in Britain itself. As a notable cadastral expert observed (Larsson 1991, 42):

"Land registration as such had great difficulty winning acceptance in England. Rights in land were commonly transferred by private conveyance... both the 1862 and the 1875 Acts failed completely to achieve their purpose. In 40 years fewer than 1000 titles were registered... The government showed no interest in encouraging registration, and the English solicitors were hardly enthusiastic advocates for registration."

In 1876, a Maori Representation Act was passed to create four Maori parliamentary seats, and bring the Maori community into the political system of the self-governing colony of New Zealand. The Act was the first important legislation undertaken to mitigate the damage to Maori-European relations caused by the Maori land wars that had just ended. A century later, another legal step towards reconciliation between the Maori and the Europeans was taken, when the Waitangi Tribunal was set up by the Government (in 1975) to examine Maori land grievances, and adjudicate on the letter and spirit of the Treaty of Waitangi.

Other important legal establishments concerned with Maori land issues include the Maori Land and Maori Appellate Courts that are governed by the Te

**Munir Morad is lecturer and Mairi Jay is senior lecturer in the Department of Geography, University of Waikato, Hamilton, NZ. E-mail: <[moradgwaikato.ac.nz](mailto:moradgwaikato.ac.nz)>.**

Ture Whenua Maori Act of 1993. The Maori Appellate Court has appellate jurisdiction over the Maori Land Court, and may state a case for the opinion of the High Court on any point of law arising in proceedings before it. Apart from its legal mandate, a Maori Land Court often performs a cultural role in settling land disputes within the Maori community. According to a notable Maori Land Court judge (Durie 1979, 48):

"It could be said that the main function of the Maori Land Court is not to find for one side or other, but to find social solutions for the problems that come before it: to settle differences of opinion so that co-owners might co-exist with a measure of harmony...to reconcile family groups."

## The Impetus for Cadastral Reform

Maori lands tend to be the most obscure pieces in New Zealand's cadastral jigsaw, because most partitions and cadastral adjustments remain unsurveyed for years. Maori land issues, therefore, pose a considerable cadastral challenge. Numerous legislations and commissions of inquiry have been formed over the past decades to address the problem, but progress has been slow.

Cultural factors have often been cited to explain the failure to resolve the persistent legal and technical hurdles confronting Maori land issues. As a New Zealand judge has observed, "the European land tenure system, in its present form, is a veritable engine of destruction of Maori land holdings" (Winmill and Morton 1993, 36). Historically, Maori society did not recognize individual ownership, and Maori land was held communally—a tenure system known by the Maori as *papatupu*. Each *Whanau* (family) and *hapu* (clan) were allocated land according to their need, by tribal chiefs (Winmill and Morton 1993, 28).

The problems facing Maori land tenure reform in New Zealand can be summed up in the following points:

- When the Treaty of Waitangi was signed in 1840, the Maori tribes owned nearly 99% of New Zealand's land; today, the percentage is nearer the 5% mark (less than half their population share).
- Historically speaking, Maori vendors may not have appreciated the finality of a land transfer deed between their chiefs and the Crown (Benwell 1993).
- Nearly 1.2 million hectares of Maori land (approximately 5% of New Zealand's land) was confiscated in the second half of the

nineteenth century from tribes "believed to have been in rebellion." Much of this confiscated land has since found its way into private titles that are not covered by modern compensation schemes (Asher 1987).

- Those Maori who have retained a communal ownership of their land resources are predominantly tribal and unfamiliar with formal land transaction procedures.
- Despite a popular willingness in New Zealand to address the Maori's land grievances, the present cadastral system is European and favors individual land titles. Although many urban Maori recognize this principle, their rural counterparts are seldom enthusiastic about individual land titles.
- Maori land holdings are difficult to demarcate because of multiple successions and counterclaims. Also, a partition sanctioned by the Maori Land Court fails to acquire full cadastral status because of lack of desire on the part of beneficiaries to survey and register the titles.

The complex cadastral situation of Maori land has evoked much discussion in legal, surveying, and environmental planning circles in New Zealand. Non-Maori experts have often argued that progress can be made by a program of title improvement, whereby all the unsurveyed, partitioned Maori lands are surveyed. However, for many cultural and economic reasons, the Maori population is reluctant to accept freehold ownership, especially in rural areas.

Maori culture is steeped in communal values; the prospect of freehold ownership is impractical where multiple ownership and successions would involve fragmenting a fast shrinking acreage held in small and isolated parcels. Furthermore, secure tenure may encourage a wave of borrowing on the part of Maori owners, which may lead to further alienation of Maori land where loan repayments are not met (Winmill and Morton 1993, 36-38).

The current cadastral crisis has arisen from a legacy marred by land confiscation, the intensification of agricultural production, and an apparent intolerance of Maori land tenure. A solution to these problems will have to embrace modern cadastral, environmental, and economic standards, as well as acknowledge Maori cultural values. As a Maori scholar studying the history of Maori land tenure system once observed:

"Choices open to tribal groups and to the individual were much as they had ever been. But since the Treaty of Waitangi in 1840, they have become increasingly qualified by the operations of a sophisticated market economy. And whatever the action taken by the

Maori in terms of these qualified choices, almost all have lent their own special impetus to the disintegration of his community life. Yet land still offers him opportunity, both for raising his material level of living and for maintaining his cultural identity as a Maori" (Kawharu 1977, 310-311).

## **The Role of Land Information Systems**

Over the past few years, interest has been mounting in New Zealand in the use of information technology in indexing Maori land records and demarcating Maori land assets. Government sources indicate that the Maori Land Court has already embarked on an information system strategy aimed at digitally replicating Court transactions, and compiling a digital list of owners (*New Zealand Official Yearbook 1996*, 326). It is well recognized in legal and Maori circles that Maori land records are very vulnerable to physical damage and loss. The complexities of multiple ownership, succession, and cross-claims (which characterize Maori land transactions) necessitate an efficient storage, indexing, and retrieval system. The new information technology system is needed to facilitate document searches, and inform the Maori Land Court and its clients.

The New Zealand Digital Cadastral Database (DCDB) is now widely employed as a base map in urban and rural land information systems throughout the country. However, the DCDB does not yet include all partitioned Maori lands that have been approved by the Maori Land Court but have not yet been surveyed. Only a small proportion of Maori land titles were available for digitization when the DCDB project was begun, although these represent only a small proportion of all possible titles. This gap in the cadastre has prompted a call for an overhaul of the cadastral information system in the country.

Eager to take advantage of new technology, some Maori tribal boards have begun employing GIS as a key component in their information technology strategy. The trend has been facilitated by the availability of DCDBs drafted especially for Maori purposes, such as lands recently returned by the state to tribal authorities. Theoretically, the Maori adoption of GIS could be hailed as a vindication of the view that GIS can serve as a democratizing tool (Good-child 1995), or even as an instrument for self-determination (Marchand and Winchell 1994).

Although some Maori-based information has been transcribed during use and occupancy studies, there is no systematic inventory of this material. Similarly, although some imaginative approaches to incorporating cultural values into land resource

planning have been suggested, there is no established way of incorporating Maori land information into official practice (Harmsworth 1995). Furthermore, it has been argued that the land information community in New Zealand is beset by wider cultural failures, including a gender imbalance in the ranks of the surveying community (Ballantyne and Han-ham 1993).

## **Environmental Sustainability and Maori Land Tenure**

Resource managers are now required by legislation to consider the Maori's values and concerns about land, and Maori are developing an increasing capacity to be involved. This process is likely to increase as the legislation becomes entrenched. It will have flow-on implications for land information system as the values and concerns of the Maori become recognized and recorded for land management purposes.

Recent environmental legislation, in fact, illustrates this point by incorporating environment-related Maori terms within the body of legislation (Crengle 1993). The historic Resource Management Act was enacted "to promote the sustainable management of natural and physical resources." According to the act, environmental agencies are required to "recognize and provide for... the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, *waahi tapu*, (sacred sites), and other *taonga* (treasures)." Furthermore, these agencies must "take into account the principles of the Treaty of Waitangi."

The Conservation Act of 1987 is another important legislation which combines concern for Maori principles of resource management with conservation of natural and physical resources. Section 4 of the Conservation Act states that the "Act shall so be interpreted and administered as to give effect to the principles of the Treaty of Waitangi."

The concept of *kaitiakitanga* (guardianship) is one which perhaps most explicitly reflects and incorporates the relationship between Maori land management and environmental sustainability. It is defined in the Resource Management Act as "the exercise of guardianship; and, in relation to a resource, includes the ethic of stewardship based on the nature of the resource itself." *Kaitiaki* (guardians) are individuals recognized by other members of the land-owning group as having special knowledge about the management of resources within that land. They are expected to protect the integrity of those resources in trust for future generations.

It is generally recognized within New Zealand that the Maori have strong associations with ancestral lands and that these may include values of an historic

and spiritual nature. Inclusion of the term *kaitiaki* (guardians) in the Resource Management Act is, therefore, an explicit recognition of a Maori cultural role that is relevant and significant for the promotions of sustainable management of natural and physical resources. This statutory development has been accompanied by a Maori cultural revival that has seen Maori actively involved in the preparation of public policy for land and natural resources. In some instances, the Maori have been prepared to challenge the courts when they believed that their cultural values and indigenous rights in relation to ancestral land have been overridden or ignored. Examples exist where Maori have expressed an opinion that a particular form or area of landscape (e.g., coastal dunes) is important for cultural reasons, and should not be developed for commercial purposes. In the past, such claims have often been overridden for reasons of cost but recently, Maori cultural and spiritual values are increasingly accepted by official agencies as relevant criteria in the management of land and natural resources.

However, it cannot be assumed that all Maori will necessarily view environmental sustainability as a key consideration in the management of ancestral land. There is a divergence of views among the Maori about "protection versus development," and many Maori leaders are of the view that development is necessary for the social and economic welfare of their people (Horsley 1989).

## Conclusion

The land information system in New Zealand has been developed by the politically dominant settler culture as a highly structured regime which places strong emphasis on individual private property rights. The clear and exact identification of private property rights has gone hand-in-hand with the development of a property records system that allows secure trading of land parcels as commodity units, unlinked to the cultural and environmental properties of space and place. This land information management system fits well with a mercantile and settler culture in which historical roots are relatively fresh. However, recent land information management and planning legislations in New Zealand have imposed an obligation on resource managers to respect the traditional rights of the indigenous Maori community, in relation to ancestral land and natural resources. The role of *kaitiaki* (guardians) mentioned earlier is one that has become incorporated into legislation, to promote a Maori-based practice of sustainable land management. Furthermore, rights to ancestral land, and involvement in public consultation, is based on genealogical claims which foster

an awareness of the individual's connection to past and future generations.

The reform of New Zealand's land information system can only be achieved by aiming to serve the *different* client groups that are affected by the gathering or supply of land information. From a management perspective it is important to appreciate the legal, technical, and cultural constraints under which the prospective land information system will work, in order to obtain the support of the client community. It is scarcely useful to draw a land information management strategy that is not backed up by legal and cultural considerations. Land tenure information is a major institutional concern in any society. While the relationship between land and people is relatively dynamic in most societies, it is not always appropriate to treat land as an ordinary asset subject to market mechanisms. In both indigenous and Western cultures, land is a primary element of the social and ecological fabric, and a crucial link in a delicate balance between economic, environmental, and cultural agencies. The lack of recognition of cultural values and other institutional conditions is probably the most common reason for the ineffective functioning of a cadastre.

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